

SZABO, Lajos, dr.; KOVACS, Zoltan, dr.; EBREY, Piroska, dr.

2 cases of Criger-Najjar disease (icterus anhaemolyticus congenitus).  
Orv. hetil. 103 no.52:2469-2474 30 D '62.

1. Szegedi Orvostudományi Egyetem, Gyermekklinika.  
(JAUNDICE NEONATAL) (PREDNISONE) (BILIRUBIN)

SZABO, Lajos, dr.; EBREY, Piroška, E.NAGY, Maria, dr.

On galactosemia. Orv. hetil. 105 no.19:865-869 10 My'64

1. Szegedi Orvostudományi Egyetem, Gyermekklinika.

\*

TOROK, Janos, dr.; B. EEREY, Pirooska, okl. vegyesz

Evaluation of bilirubin determination from the viewpoint of  
exchange transfusion in newborn infants. Orv. hetil. 106 no.46:  
2164-2167 14 N '65.

1. Szegedi Orvostudományi Egyetem, Gyermekklinika és Veszpremi  
Megyei Gyermekkorház.

SZABO, L.; KOVACS, Z.; EBREY, P.B.

Crigler-Najjar's Syndrome. Acta paediat. acad. sci. Hung. 3 no.1:  
49-70 '62.

1. Department of Paediatrics, University of Medical School, Szaged.  
(KERNICTERUS case reports)

NEMEC, Pavel; BALAN, Jozef; EBRINGER, Libor; SATURA, Dezider

The use of fermented grain extract as a source of vitamin B<sub>1</sub> for  
biological enrichment of bread. Biologia 16 no.2:97-102 '61.  
(EEAI 10:8)

1. Biologicky ustav Slovenskej akademie vied Oddelenie technickej  
mikrobiologie, Bratislava, a Katedra fyziologie rastlin, Oddelenie  
mikrobiologie Prirodovedeckej fakulty University Komenskeho,  
Bratislava.

(BREAD) (VITAMIN B<sub>1</sub>) (GRAIN)

DROBNICA, L.; EBRINGER, L.

The determination of the activity of some enzymes of carbonmetabolism in extracts of *Euglena gracilis* cells. *Folia microbiol.* 8 no.1:56-59 '63.

1. Department of Technical Microbiology and Biochemistry, Faculty of Chemistry Slovak Technica University, Bratislava, and Department of Microbiology, Komensky University, Bratislava.

(EUGLENA) (ALDOLASE) (DEHYDROGENASES) (PHOSPHOTRANSFERASES)  
(MALATE DEHYDROGENASE) (AMINOTRANSFERASES) (LACTATE DEHYDROGENASE)  
(ASPARTATE AMINOTRANSFERASE)

CZECHOSLOVAKIA

Libor EBRINGER, Department of Microbiology, Chair of Plant Physiology,  
Faculty of Natural Sciences, Comenius University (Mikrobiologické  
oddelenie Katedry fyziologie rastlin Prirodovedeckej fakulty Univerzity  
Komenskeho,) Bratislava.

"Erythromycin-Induced Apochlorosis of *Euglena gracilis* Cells."

Bratislava, Biologia, Vol 18, No 5, 1963; pp 371-376.

Abstract [German summary modified]: Erythromycin 25 to 2000 gamma/ml  
inhibits chloroplast formation in *Euglena gracilis*. Effect is  
synergistic with streptomycin effect at 1:1 ratio. Two tables, 4  
graphs, 4 photomicrographs; 9 Western and 1 Czech reference.

1/1

EBRINGER, L.

Bleaching of Euglenas by antibiotics - a specific form of antagonism in Actinomycetes. Folia microbiol. (Praha) 9 no.4: 249-255 15 Je'64

1. Department of Microbiology, Comenius University, Bratislava.



KRAMAR, A.; EBRINGEROVA, A.

Effect of noncellulose components on the reactivity of beech  
sulfate pulp. Khim.volok. no.3:29-32 '62. (MIRA 16:2)

1. Institut drevesiny, tsellyulozy i khimicheskikh volokon  
Slovatskoy Akademii nauk, Bratislava, Chekhoslovatskaya  
Sotsialisticheskaya Respublika.  
(Cellulose) (Woodpulp)

EBRINGEROVA, Anna; KRAMAR, Alojz

Behavior of beech sulfate cellulose in NaOH solutions. Chem  
prum 13 no.8:441-445 Ag'63.

1. Ustav dreva, celulozy a chemickych vlakien, Slovenska aka-  
demia vied, Bratislava.

ECATERINA, Ancuta, ing.

Converter steel or open hearth steel? St si Teh Buc 16 no.2:27-29  
F '64.

ECHA, G.[Jeca, G.]

Intecommunication of venae communicantes with the fasciae of the  
shin. Vestis Latv ak no.6:173-178 '60.

(KEAI 10:9)

(VEINS) (FASCIAE (ANATOMY)) (LEG)

44915

K/009/62/000/012/004/004  
D272/D308

1.2307

AUTHOR:

Echim, I.T., Engineer

TITLE:

Technology of erection and welding of spherical tanks with diameters up to 20 m, of 500 and 200 m<sup>3</sup> volumes and working pressure of 7 atmospheres

PERIODICAL:

Metălurgia și Construcția de Mașini, no. 12, 1962, 1112-1120

TEXT:

A description of a recommended procedure (based on practical experience) for the erection and welding of spherical all-welded tanks, composed of 3 zones. The sheets were manufactured by punching in spherical section, the central zone comprising 16 sheets, the top and bottom zone - 12 sheets each, the sphere being locked at the top and bottom by calottes. The tanks were supported on 8 or 6 steel pipe columns, connected to a concrete foundation. The characteristics of the steel employed are presented. The technological procedure described comprised details on the welding and support-

Card 1/2

Technology of erection ...

R/009/62/000/012/004/004  
D272/D308

ing devices, preliminary trial welding, testing, preliminary welding of sheets on the ground into larger segments, actual welding of the assembled sphere, as well as final tests for pressurized conditions. There are 11 figures.

ASSOCIATION: Intreprinderea de montaje - Bucuresti (Erection Enterprise - Bucharest)

Card 2/2

ECHIM, Ilie T., ing.

Metal welding with electric arc and wolfram electrode in inert gas medium, Metalurgia constr mas 14 no.6:546-553 Je '62.

1. Intreprinderea de montaje Bucuresti din Ministerul Industriei Petrolului si Chimiei.

ECHIM, Ilie T., ing.

Contributions to the welding of aluminum and its alloys. Constr  
mas 15 no.5:371-376 My '63.

1. Intreprinderea de montaje din Ministerul Industriei Petrolului  
si Chimiei, Bucuresti.



1. The author discusses the technology of the

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11. The author discusses the technology of the

ECHIZLI, Eugen, ing.

Results obtained in gallery advancing with the II K-3 combine at the Sotenga Mining Enterprise, of the Muntenia Mining Trust. Rev min 13 no.8:382-384 Ag '62.

SELLEI, Camillo, dr.; ECHKARDT, Sandor, dr.

5-year clinical experience with Degranol. Orv. hetil. 103 no.25:1168-1172 24 Je '62.

1. Orszagos Onkologiai Intezet, Belosztaly.  
(NITROGEN MUSTARDS ther) (NEOPLASMS ther)  
(LEUKEMIA ther)

BOYER, Tibor, dr.

Space flight and medicine. Elet tud 16 no.34:1063-1066 20 Ag '61.

ECHTER, Tibor, dr.

What does an astronaut eat? Elet tud 16 no.39:1218 24 3  
'61.

HUNGARY

HIDEG, J., Dr, Medical Captain (orvosszazados); SELENOSER, F., Dr, Medical Chief-Lieutenant (orvosfőhadnagy); ECHTER, T., Dr, Medical Lieutenant-Colonel (orvoselezredes); GATI, T., Dr; FOMI, M., Dr; MARTON, L., technical assistant; [Affiliation not given].

"Hypoxia and Oxygen Respiration in Their Effects on Shay-Ulcers of Rats."

Budapest, Honvedorvos, Vol 14, No 4, Oct-Dec 62, pp 317-320.

Abstract: [Authors' Hungarian summary] A hypoxic environment fully prevents the formation of ulcers in rats as a result of Shay-operations. Hyperoxic environment tripled the appearance of ulcerous changes resulting from the operation. Acidification of the duodenum and bilateral adrenalectomy prevented completely the enhancing effect of the hyperoxic environment. Two of 10 references are Hungarian, the rest Western.

1/1

ECSTER, Tibor, dr., repülőorvos; SINKA, József, tanár

Vostok-5 and Vostok-6. Term tud közl 7 no.7:289-292 JI '63.

ECHTER, Tibor, dr., repuloorvos alezredes

Women and cosmic medicine. Elet tud 18 no.26:819-822 30 Je '63.



ECHTER, Tibor, dr., repuloorvos alezredes

Medical science for the safety of flight. Elet tud 18 no. 34:  
1077-1079 25 Ag '63.

\*

ECHTER, Tibor, dr., orvos-alezredes

The first multiseated spaceship. Term tud kozl 8  
no.12:546-550 D '64.

ECHTER, Tibor, orvos alezredes

Cosmic medicine. Elet tud 19 no.21:963-966 22 My '64.

ECHTER, Tibor, dr., repuloorvos alezredes

Astronauts working in interplanetary space. Elet tud 19 no.40:  
1875-1879 2 0 '64.

ECHTER, Tibor, dr., repuloorvos, alazredes

4 months in the space cabin. Elet tud 19 no.46:2163-2167 13  
N '64.

ECHTER, Tibor, dr., repulo orvos alezredes

Man in outer space. Elet tud 20 no.17:786-789 30 Ap '65.

ECHTER, Tibor, dr.

Microbiological and physiological observations and problems  
concerning the life beyond the biosphere of the earth. Elovilag  
10 no.1:15-19 '65.

KUMER, Marjan, inz. (Oberhausen Rhld, Weilerstrasse 109, Zahodna Nemčija);  
ECIMOVIC, Ljubo, dipl. inz. (Oberhausen)

Coal hardness and its importance for the projecting of aggregates  
with dust heating. Strož vest 8 no.4/5:99-101 0 '62.



SZABC, L.; SZABADOS, Therese; ECK, Erna H., unter technischer Assistenz von  
BERNATSKY, M.

Glutamic acid oxalacetic acid transaminase determinations in infancy  
and childhood. I. Studies in relation to hydrocephalus. Acta Paediat  
Acad Sci Hung 1 no.3:199-209 '60.

1. Kinderklinik der Medizinischen Universität, Szeged.

(TRANSAMINASES blood) (HYDROCEPHALUS blood)

SZABO, L.; SZABADOS, Therese; ECK, Erna H., unter technischer Assistenz von  
BERNATSKY, M.

Glutamic-oxalacetic acid transaminase determinations in infancy and  
childhood. II. Studies on premature and newborn infants. Acta Paediat  
Acad Sci Hung 1 no.3:211-221 '60.

1. Kinderklinik der Medizinischen Universität, Szeged.

(TRANSAMINASES blood) (INFANT NEWBORN blood)  
(INFANT PREMATURE blood)

SZABO, Lajos, dr.; SZABADOS, Terez, dr.; ECK, Erna, H. (technikai  
munkatars: BERNATSKY, Margit)

Glutamic acid-oxalacetic acid transaminase determinations in  
infancy and childhood. Part II. Studies in connection with  
hydrocephalus. Orv.hetil. 101 no.3:87-91 Ja '60.

(HYDROCEPHALUS diag.)

(TRANSAMINASES chem.)

KOVACS, Zoltan, dr.; E. NAGY, Maria, dr.; H.-ne ECK, Erna

Treatment of premature infants with anabolic steroids. The effect of domestically-produced Merobol compared with foreign products. Gyermekgyógyászat 14 no.10:307-311 0 '63.

1. A Szegedi Orvostudományi Egyetem Gyermekklinika-jának  
(Igazgató: Boda Domokos dr. egyet. tanár) közleménye.  
(INFANT, PREMATURE) (BIRTH WEIGHT)  
(GROWTH) (ANABOLIC STEROIDS)  
(HYDROXYMETHYLTESTOSTERONE)

ECK, L.

"Modernization of cotton-manufacturing machines." p. 87

MAGYAR TEXTILTECHNIKA (Textilipari Muszaki es Tudomanyos Egyesulet)  
Budapest, Hungary, Vol. 11, No. 2, Feb. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959  
Uncl.

Country	: ROMANIA	II
Category	: Chemical Technology. Chemical Products (Part 4). Dyeing and Chemical Treatment of Textile Mate-	
Abs. Jour.	: Ref Zhur-Mzhik, 1959, No 7, 25890	rials
Author	: Radulescu, S.; Eckardt, A.; Fischer, A.;	
Institut.	: -	
Title	: Production of Plush by the Electrostatic Process	
Orig Pub.	: II-a Conf. tehn.-stiint. a ind. usurar. Textile. (Bucuresti), ASIT, 1957, 262-267	
Abstract	: A method was developed and the equipment constructed for the production of plush fabrics by means of impregnating the backing with an adhesive substance and applying the fibers, orientated by means of an electrostatic field, perpendicularly to the surface of the backing. The equipment consists of a machine for cutting the	
	* Chircolas, C.; Manolescu, D.; Loman, V.; Hulea, I.	
Card:	1/3	

Country	: RUMANIA	H
Category=	: Chemical Technology. Chemical Products (Part 4).	
	: Dyeing and Chemical Treatment of Textile Materials.	
Abs. Jour.	: Ref Zhur - Khim., No 7, 1959, No 25800	
Author	:	
Institut.	:	
Title	:	
Orig. Pub.	:	
Abstract	: fibers, an aggregate for electrostatic application of the fibers of the cleaning brush to the backing, and a vulcanization chamber. The length of the fibers is 0.2-0.5 mm. for velours and 0.5-1 mm. for plush. The moisture of the fibers at which their electrical conductivity is highest is 12-13%. To increase the electrical conductivity, the fibers are treated before cutting, during the process of dyeing, with hygroscopic salts, avoiding the application of fat-containing	
Card:	2/3	
	H-162	

Country	: RUMANIA	H
Category	: Chemical Technology. Chemical Products (Part 4). Dyeing and Chemical Treatment of Textile Materials.	
Abs. Jour.	: Ref Zhur - Khim., No 7, 1959, No 25890	
Author	:	
Institut.	:	
Title	:	
Orig Pub.	:	
Abstract	: auxiliary preparations. The adhesive substance is prepared on the basis of the latex of natural rubber. As backing, the fabric woven with linen or serge twill or a special paper is used.-- G. Markus	
Card:	3/3	



*Category : POLAND / Electronics*  
Category : POLAND/Electronics - Semiconductor devices and photoelements

H-8

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 1735

Author : Eckart, Friedrich,

Title : Semiconductors and their Role in Engineering

Orig Pub : Pastepy fiz., 1956, 7, No 2, 115-136

Abstract : Survey article. Bibliography, 20 titles

Card : 1/1

HUNGARY/Chemical Technology - Chemical Products and Their  
Application. Leather. Mechanical Gelatins.  
Tanning Materials. Technical Albumins.

H-35

Abs Jour : Ref Zhur - Khimiya, No 17, 1958, 59696  
Author : Fleischer, K., Eckart, R.  
Inst : -  
Title : Contemporary Statu of Fur Dyeing.  
Orig Pub : Bor-es cipotechn., 1957, 7, No 5-6, 111-114.

Abstract : Various factors are discussed which influence the  
dyeing of furs: types and conditions of the applica-  
tion of various mordants (biochromate, iron); concen-  
tration of mordant, pH mediums, structure of hairs, ac-  
tion of so-called "intermediate membranes". New dyes  
for furs are described: "celindon" [sic] "nako-fast"  
[sic] (vat dyes); "ainnia", "orazol" [sic] (acid  
dyes); "celliton" and "celliton-fast" (dyes for acetate  
silk). The method of their application, and an

Card 1/2

- 114 -

HUNGARY/Chemical Technology - Chemical Products and Their  
Application. Leather. Mechanical Gelatins.  
Tanning Materials. Technical Albumins.

H-35

Abs Jour : Ref Zhur - Khimiya, No 17, 1958, 59696

evaluation of their advantages and disadvantages and  
color fastness are given.

Card 2/2

RACHEV, L.; MARINOV, D.; STATEVA, St.; ECKENAZI, Fr.; CHOBANOVA, St.

Antibiotic therapy in childhood. Suvr. med. 2:13-19 '63.

(ANTIBIOTICS)

ECKER, G.

**PLATE 1 BOOK EXHIBITION**

DOT/A-257

Optical-skye prismatrye pland; ebornal staley (Optical Pyrametry of Plasm  
Collection of Articles) Moscow, Iss-to Inostrannyi Yazyk, 1960. 438 p.  
No. of copies printed not given.

Bd. (Title page): H.W. Sawyer, Pleasant Rd. (Inside book): L.P. Faltusmano,  
Pleasant Rd. To S. Arroyos.

[illegible]

### 5. CONCLUSIONS AND RECOMMENDATIONS

Chen, W. Determining the Field Distribution of Temperature in a Heavy Gas at Very High Pressure of the Isotropy of the Distribution of Self-generated Ions (Dissertation thesis). Institute of Solid State Thermophysics, USSR Academy of Sciences, Moscow, 1964.

Chen, W. and V. A. Kiselev. Thermophysical Properties of Matter. Vol. 1. Thermophysical Properties of Matter. (Russian transl.) Zetselshteyn for Scientific Publications, Moscow, 1964.

Chen, W. and V. A. Kiselev. 1955 (Condensed translation by V. A. Kiselev and V. A. Kiselev).

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[illegible]

Koch, J. P. and H. P. Perilla. Spectral Absorption Method for Determining Proportion of "Active" to "Inactive" in Rat Ovaries (Source: J.O.B.A. 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635

PAGE 22. SPECIAL INTERESTS OF RESEARCH IN CONNECTION OF TASKS

Butler, George. Drinking Water Temperature. Cold Water Supply  
Institute. Bulletin 11. 1914. Highgate, Mass. (Washington, D.C.,  
U.S. Government Printing Office, 1914). (Reprinted and published by  
J.M. K. Seasholtz.)

2010 5-16-61 D. W. LARSEN, "The Determination of Air Temperatures  
by the Use of the Wet-Bulb Globe Thermometer," *Trans. ASHRAE*,  
Vol. 65, Part 1, 1955, p. 1283.  
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FD-302 (Rev. 5-11-64)

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[5] *Journal für Physik*, **20**, No. 5, 521-526, 1951 (Translated by V. J. Lerman and V. J. Alyokhin)

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ECKERSDORF, K., mgr inz.

Conference on automation problems of electrothermic  
processes. Pomary 9 no.2:86-87 F '63.

ECKERT, dr.ing.; URVOLGYI, Ferenc Konrad; TOTH, Gy. Istvan

Application of gas turbines in motor vehicles. Jarmu mezo gep  
9 no.8:284-295 Ag '62.

ECKERT, B.

~~SECRET~~  
Orientating effect of polarized light on Daphnia. Chekh. biol. 2  
no. 2: 78-83 Ap '53. (MLRA 7:2)

1. Institut biologie ChSAR, Praha.  
(Orientation) (Light, Physiological effect) (Cladocera)



BCKERT, B.; ZACHAROVA, D.

The lability of the excitor and inhibitor nerve fibres of the claw of the crayfish. Chekh. fiziol. 3 no.2:191-197 1954.

1. Biological Institute, Physiology Department, Czechoslovak Academy of Science, Prague.

(NERVES, physiology,

conduction of excitor & inhib. nerve fibers of claw in crayfish)

(CRUSTACEA,

conduction of excitor & inhib. nerve fibers of claw in crayfish)

ECKERT, B. & ZACHAROVA, D.

Further studies on physiology of excitation and inhibition of abducent nerve fibers of the crab claw. Cesk. fysiол. 6 no.1: 22-31 '57.

1. Fysiologicky ustav Cesav, Praha.

(NERVES, anatomy and histology,

excitation & inhib. fibers of abducent nerve of crab claw (Cx))

(CRUSTACEA,

crab claw abducent nerve, excitation & inhib. fibers (Cx))

ECKERT, B.

Myotatic reflexes in crab claws. Cesk. fysiол. 7 no.3:192-194 May 58.

1. Fysiologicky ustav CSAV v Praze.

(CRUSTACEA,

myotatic reflexes in crab claws (Cz))

ECKERT, B.

Further studies on the influencing of the motor rhythm in Aurellia.  
Cesk. fysiол. 8 no.3:181-182 Apr 59.

1. Fysiologicky ustav CSAV, Praha Predneseno na III. fysiologickych dnech  
v Brne 13. 1. 1959.

(COELENTERATES,  
movement (Gz))

CZECHOSLOVAKIA

8

BARTOS, J., POKORNY, J., ECKERT, V., KRUSINA, L., and TEISINGER, P., with technical cooperation of LUKASOVA, I., SLIVOVA, L., MATOUSOVIC, J., GRUNT, J., DYLEVSKY, J., and DUBSKY, J., First Clinic of Surgery (I. chirurgicka klinika), Faculty of General Medicine (Fakulta vseobecneho lekarstvi), Charles University, Prague, Prof. Dr. PAVROVSKY, director; Fourth Clinic of Internal Medicine (IV. interni klinika), Faculty of Internal Medicine, Charles University, Prague, Prof. Dr. M. FUCIK, director; Radiological Clinic (Radiologicka klinika), Faculty of General Medicine, Charles University, Prague, Prof. Dr. V. SVAB, director, [individual affiliations cannot be determined].

"Direct Revascularization of Myocardium Following an Experimental Infarct in Dogs"

Prague, Casopis Lekaru Ceskych, Vol CII, No 26, 28 June 63, p 725.

Abstract: Experiments lead to the following conclusions:

1. Anastomosis between the system and coronary artery is feasible even with a pulsating heart. 2. Infarct-like changes were observed following the tying of r. interventricularis. A partial adjustment took place following anastomosis. 3. Microscopic examination showed ischemic deposits in dogs with anastomosis

1/2

CZECHOSLOVAKIA

Prague, Casopis Lekaru Ceskych, Vol CII, No 26, 28 June 63,  
p 725.

in contrast to large infarcts in dogs without anastomosis.  
4. A sudden inflow of blood into the ischemic deposit may be  
accompanied by an immediate fibrillation of chambers. It can  
be prevented by a temporary interruption of the blood flow  
by means of anastomosis and its slow and interrupted liberation.

2/2

**ECKERTOVA, A.**

Contributions to the toxicity of DDT. Biol. listy, Praha 32 no.3:208-  
213 Dec 51. (CML 21:5)

1. Of the Research Institute of Biology and Pharmacology, Prague XII.

ECKERTOVA, A.; FRANC, Z.

Determination of thyrotropic hormone activity with the aid of radioactive iodine, I-131. Cesk.fysiol.10 no.1:48-50 Ja '61.

1. Vyskumny ustav pro farmacie a biochemii, Praha.  
(IODINE radioactive)  
(THYROTROPIN pharmacol)



SCHREIBER, V.; KOCI, J.; ECKERTOVA, A.; FRANC, Z.; KRENTOVA, V.

The hypothalamic factor activating adenohipophysial acid phosphatases and tsh release in vitro: further purification by high-voltage electrophoresis. Physiol Bohemoslov 10 no.5:417-426 '61.

1. Laboratory for Endocrinology and Metabolism, Third Medical Clinic, Faculty of General Medicine, Charles University, Prague; Institute of Haematology and Blood Transfusion, Prague; Institute of Pharmacy and Biochemistry, Prague.

(HYPOTHALAMUS physiol)

(PHOSPHATASES metab)

(PITUITARY GLAND ANTERIOR metab)

(THYROTROPIN physiol)

SCHREIBER, V.; RYBAK, M.; KOCI, J.; ECKERTOVA, A.; FRANC, Z.; JIRGL, V.  
KMENTOVA, V.; KAPITOLA, J.; SEBESTIK, V.; KNESLOVA, V.

Hypithalamic factor releasing thyrotropin (TRF). Acta Univ.  
Carol. [med.] (Praha) 10: suppl. 17:105-110 '63

1. Laborator pro endokrinologii a metabolismus, fakulty vse-  
obecneho lekarstvi University Karlovy v Praze (reditel: akade-  
mik Josef Charvat); Ustav hematologie a krevni trasfuse (reditel:  
prof. MUDr. J. Horejsi) a Vyzkumny ustav pro farmacii a bio-  
chemii (reditel: dr. inz. O. Nemecek).

SCHREIBER, V.; ~~ECKERTOVA, A.~~; FRANC, Z.; RYBAK, M.; GRIGOROVA, I.; KMENTOVA, V.;  
JIRGL, V.

Purification of the hypothalamic thyrotrophinreleasing factor. Physiol.  
bohemoslov. 12 no.1:1-14 '63.

1. Laboratory for Endocrinology and Metabolism, Third Medical Clinic,  
Faculty of General Medicine, Charles University, Institute of Pharmacy  
and Biochemistry, Institute of Haematology and Blood Transfusion,  
Prague.

(HYPOTHALAMUS) (THYROTROPIN) (ELECTROPHORESIS)  
(PEPTIDES) (AMINO ACIDS) (ASPARAGINE) (GLUTAMATES)  
(GLYCINE) (ISOLEUCINE) (THREONINE) (LEUCINE) (SERINE) (VALINE)

CZECHOSLOVAKIA

J. LAURENTOVA, J. BASTECKY, J. ECKERTOVA and H. ZAFLATILKOVA,  
Psychiatric Hospital (Psychiatricka lecebna,) Prague.

"Use of Some Analytical Tests for Psychopharmacologic Drugs in the  
Urine in Psychiatric Practice."

Prague, Activitas Nervosa Superior, Vol 5, No 2, May 63; pp 195-197.

Abstract: Review of experiences with 810 tests, used mainly as a  
control that patient does take medication as prescribed; in a few  
instances for toxicologic purposes. The drugs causing false positives  
and false negatives are listed in the discussion, with regard to 10  
psychopharmacologic drugs. Four Western and 9 Czech references.

ECKHARDT, A

HUNGARY/Electronics - Electron Microscopy

H-4

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 7102

Author : Eckhardt, A.

Title : Virtual and Real Image in Electron Microscope

Orig Pub : Magyar tud. akad. Musz. tud. oszt. kozl., 1955, No 2-4, 337-346

Abstract : No abstract

Card : 1/1

ECKHARDT, A.

EXCERPTA MEDICA Sec 16 Vol 6/10 Cancer Oct 58

3921. *Clinical experience in tumour therapy with N-oxyd-Lost* Klinische Erfahrungen in der Tumorthherapie mit N-Oxyd-Lost. SELLE C. and ECKHARDT A. Inn. Abt., Onkol. Landes-Inst., Budapest *Munch. med. Wschr.* 1958, 100/19 (761-766) Tables 3

Patients with inoperable tumours and who were irresponsive to radiotherapy were subjected to therapy with 'mitomen' alone and to combined therapy with mitomen and degranol, or mitomen and sarcolysin. The results of these investigations were compared. Thirty-nine patients were treated with mitomen only. Eighteen patients showed a temporary improvement of their complaints, however, without evidence of regression of the tumours. In 6 patients a definite improvement was noted. Three of these patients were cases with cancer of the uterus. Twenty-four patients were treated with a combination of mitomen and degranol. The therapeutic results were less favourable than with mitomen alone. The authors found an adverse summation of toxic effects on the bone marrow so that no advantage could be noted with this combination. No advantages were observed in 5 patients where a combined therapy of mitomen and sarcolysin was given. Mitomen is an effective and relatively well-tolerated cytostatic substance. According to informative investigations successful results can be obtained by mitomen chiefly in cases of cancer, especially in cancer of the uterus.

ECKHARDT, Ede; VARGA, Janos

Cotarnine derivatives for local anesthesia. Magyar korn folyoir 67 no.12:  
509-511 D '61.

1. Budapesti Muszaki Egyetem Szerves-Kemial Tanszeke.

BEKE, Denes; ECKHART, Ede

Data on the chemistry of heterocyclic, pseudobasic amino carbinols. XXI. Synthesis of 2-aryl-3,4-dihydro-iso-quinolinium salts by means of the interaction of 2-aryl-1,2,3,4-tetrahydro-iso-quinolines and N-bromine-succin-imide. Magy kem folyoir 68 no.3:125-128 Mr '62.

1. Budapesti Muszaki Egyetem Szerves-Kemiai Tanszeke 2. "Magyar Kemiai Folyoirat" szerkeszto bizottsagi tagja (for Beke)



SCHREIBER, V. KMENTOVA, V.; RYBAK, M.; ECKERTOVA, A.

Anti-thyrotrophin releasing factor (TRF) activity of synthetic  
3-valine-oxytocin. Physiol. Bohemoslov. 14 no.1:53-63 '65

1. Laboratory for Endocrinology and Metabolism, Third Medical  
Clinic, Faculty of General Medicine, Charles University, Institute  
of Haematology and Blood Transfusion and Institute of Pharmacy  
and Biochemistry, Prague.

LAURENTOVA, J.; BASTECKY, J.; ECKERTOVA, J.; ZAPLATILKOVA, H.

Use of reactions to psychopharmacological agents in the urine  
in psychiatric practice. Aktiv. nerv. sup. 5 no.2:195-197  
My '63.

1. Psychiatricka lecebna, Praha.

(MENTAL DISORDERS) (URINE) (CHLORPROMAZINE)  
(TRANQUILIZING AGENTS) (THIORIDAZINE)  
(PROCHLORPERAZINE) (PERPHENAZINE)  
(LEVOMEPROMAZINE) (IMIPRAMINE)  
(MEPROBAMATE) (PROMETHAZINE)  
(GUAIACOL GLYCERYL ETHER)  
(PSYCHOPHARMACOLOGY)

SALATOVA-ECKERTOVA, LUDMILA

The measurement of the induced conductivity of an antimony-cesium cathode. Ludmila Salatova-Eckertova. Czechoslov. J. Phys. 4, 551-2 (1956). The change of cond. produced by electron bombardment on the surface of the Sb-Cs cathode was detd. by measuring the current. The intensity of the current in the film increased with a rise of the energy of electrons. The relative increase of current was high at the low initial current and dropped with increase of it. M. Charinandarian

SMW/STH

BRITISH VA-101 VA, 1.

Measurement of induced conductivity of anisotropic cathode ray.  
p. 575.

CZECHOSLOVAKSKY ZASADIS PRO FYZIKU vol. 5, no. 5, Sept. 1955

Czechoslovakia

so. FIRST EUROPEAN ACADEMIC LIST vol. 5, no. 7 July 1956

*Eckertova, Ludmila*

Czechoslovakia/Electronics - Photoeffect. Electron and Ion Emission, H-2

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35100

Author: Eckertova, Ludmila

Institution: Moscow Power Institute

Title: On the Simultaneous Effect of Light and Electrons on Certain Substances

Original

Periodical: Ceskosl. casop. fys., 1956, 6, No 1, 1-8; Czech

Abstract: It is shown that the Dember scheme for measuring the additiveness of the photo emission and secondary emission is not suitable and that Dember made a mistake in explaining his experiments. The full additiveness of the photo current and secondary-electron current is experimentally demonstrated for Mg and Al. It is also shown that not too excessive a surface oxidation does not disturb this additiveness. It is shown that the phenomena observed by Shmakov in photocells with 2 cathodes can be explained as the consequence of the configuration of the electric field and the distribution of the

Card 1/2

Czechoslovakia/Electronics - Photoeffect. Electron and Ion Emission, H-2

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35100

Abstract: space charge in the multiplier. Measurements made with special tubes employing electron beams and antimony-caesium photo cathodes have demonstrated additiveness of photo emission also with antimony-caesium photo cathode (when white light illumination is used) and of the secondary emission. Bibliography, 15 titles.

Card 2/2

Eckertova, L.

Secondary emission of electrons. P. 64  
CESKOSLOVENSKY CASOPIS PRO FYSIKU. (Ceskoslovenska akademie ved.  
Ustav technicke fysiky) Praha  
Vol. 6, no. 1, Jan. 1956

Source: EEAL - LC Vol. 5. No. 10 Oct. 1956

ECKERTOVA, L.

Category : CZECHOSLOVAKIA/Electronics - Photoeffect. Electron and Ion Emission H-2

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4271

Author : Eckertova, Ludmila; Vejvokova, Jirina

Inst : Mathematical-Physical Faculty of the Charles University in Prague  
Czechoslovakia.

Title : Concerning the Theory of Secondary Electron Emission

Orig Pub : Ceskosl. casop. fys., 1956, 6, No 3, 365-366

Abstract : An equation is derived for the dependence of the coefficient of secondary emission on the energy of the primary electrons. The calculated dependence is confirmed experimentally. Bibliography, 6 titles.

Card : 1/1



**"APPROVED FOR RELEASE: 03/13/2001**

**CIA-RDP86-00513R000411930005-8**

**APPROVED FOR RELEASE: 03/13/2001**

**CIA-RDP86-00513R000411930005-8"**

ECKERTOVA, L.

Eckertova, L.; Paty, L.

Eckertova, L.; Paty, L. Once more on the problem of the division of a vacuum. p. 113.

Vol. 18, no. 2, Feb. 1957  
SLABOPROUDY OBZOR  
TECHNOLOGY  
Czechoslovakia

So. East European Accessions, Vol. 6, May 1957  
No. 5

CZECHOSLOVAKIA/Electronics - Electron and Ion Emission

H-2

Abs Jour : Ref Zhur - Fizika, No 1, 1959, No 1332

Author : Eckertova L.  
Inst : ~~A~~ Karlovy University, Czechoslovakia  
Title : Cold Electron Emission

Orig Pub : Podroky mat., fys. a astron., 1958, 3, No 1, 53-59

Abstract : Brief discussion of the physical principles of cold electron emission and possibilities of employing cold emission and the application of auto-electronic and auto-ionic microscopes (electron and ion projectors).

A.M. Rozenfel'd

Card : 1/1

CZECHOSLOVAKIA/Electronics - General

H-1

Abs Jour : Ref Zhur - Fizika, No 12, 1958, No 27951

Author : Eekortova Ludmila

Inst : Not Given

Title : Eighth All-Union Conference on Cathode Electronics in Leningrad, 17-24 June 1957.

Orig Pub : Ceskosl. casop. fys., 1958, 8, No 2, 274-276.

Abstract : No abstract

Card : 1/1

CZECH/37-59-2-16/20  
AUTHORS: Marie Partlová, Ludmila Eckertová  
TITLE: Letter to the Editor: The Maximum of Thermal Emission  
and Photo-Emission of a Silver Caesium Photo-Cathode  
PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 2,  
pp 215-217

ABSTRACT: In the literature (eg Ref 1) it is usually stated that during the activation of a silver caesium photo-cathode, the maximum of thermal emission and photo emission occurs at the same time. Because it is experimentally easier to observe thermal emission, one uses the maximum in thermal emission as an indication that the activation of the photo-cathode has been completed. However, this is not always so. The current due to thermal emission It was registered and, during illumination, the photo current was measured. In our arrangement,  $I_{t\max}$  and  $I_{p\max}$  were of the same order of magnitude. The light was switched on for short periods only (approximately 1 second). It has been found that the time of activation needed to reach one maximum was usually different from that needed for the other (see Figs 1a and 1b - the dotted line shows the photo emission while

Card  
1/2

CZECH/37-59-2-16/20

Letter to the Editor: The Maximum of Thermal Emission and Photo-Emission of a Silver Caesium Photo-Cathode

the full line shows the thermal emission).

There are 1 figure and 3 references, of which 2 are Soviet and 1 Czech.

ASSOCIATION: Katedra vysoké frekvence a vakuové techniky  
matematicko-fyzikální fakulty Karlovy university,  
Card 2/2 Praha (Chair of High Frequency and Vacuum Technology,  
Charles University, Prague)

SUBMITTED: October 25, 1958

AUTHOR: Ludmila Eckertová

CZECH/37-59-4-11/16

TITLE: Modern Efficient Photo Cathodes<sup>21</sup>

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 4,  
pp 424-435

ABSTRACT: This is a review article dealing solely with the physical properties of only three types of photo cathodes which are very widely used and detailed information about them has been published in accessible literature. A number of important problems relating to the study of the external photo effect are not dealt with. This applies particularly to photo emission of metals (which is important from the theoretical point of view as well as from the point of view of detection of short wave radiation) and to the photo emission of semiconductors, the structure of which is better known.

Card 1/1 There are 9 figures, 2 tables and 49 references, of which 7 are English, 19 Soviet, 4 German, 1 Swiss, 3 Japanese and 15 Czech.

ASSOCIATION: Katedra vysoké frekvence a vakuové techniky  
Karlovy university, Praha (Chair of Electronics and  
Vacuum Physics, Charles University, Prague)

06636

AUTHOR: Eckertová, Ludmila

CZECH/37-59-5-12/13

TITLE: Seminar on Electronics and Vacuum Physics (News Item)

PERIODICAL: Československý časopis pro fysiku, 1959, Nr 5,  
p 551

ABSTRACT: Brief news item about a regular seminar held at Charles  
University, Prague.

ASSOCIATION: Katedra elektroniky a vakuové fyziky na matematicko-  
fyzikální fakultě KU, Praha (Chair of Electronics and  
Vacuum Physics of the Mathematico-physical Faculty of  
Charles University, Prague)

SUBMITTED: April 10, 1959

Card 1/1



AUTHOR: Ludmila Eckertová CZECH/37-59-6-12/25

TITLE: Oxidized Layers with High Secondary Emission  
Coefficients

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 6,  
pp 628-644

ABSTRACT: Survey of the methods of activating alloys whose active components are Mg, Be or other metals forming stable oxides, which have a high secondary emission coefficient. The physical properties of the activated alloys are discussed, particularly the causes of the high coefficient of secondary emission, the peculiarities of the energy distribution of the electrons, and the causes of fatigue. Apart from a survey of data from literature, the paper also gives some of the results obtained in the laboratory of the Department. The information is dealt with under the following chapter and paragraph headings: 1) Demands to be met by the secondary emission electrode in multipliers; 2) Considerations relating to the selection of suitable materials; 3) Alloys applied and their activation (magnesium alloys; beryllium alloys; other alloys;

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1/2

CZECH/37-59-6-12/25

Oxidized Layers with High Secondary Emission Coefficients

emitters obtained by simultaneous vacuum evaporation of two metals; MgO layers prepared by other methods;  
4) Some of the physical characteristics of oxidized alloys (causes of a high coefficient of secondary emission; energy distribution of electrons; temperature dependence of the secondary emission; fatigue of emitters).

Card  
2/2

There are 15 figures, 2 tables and 49 references, of which 4 are Czech, 9 German, 15 Soviet, 1 Swiss, 1 French, and 19 English.

ASSOCIATION: Katedra elektroniky a vakuové fyziky na matematicko-fyzikální fakultě Karlovy university, Praha  
(Chair of Electronics and Vacuum Physics,  
Mathematics and Physics Department, Charles  
University, Prague) ✓

SUBMITTED: June 18, 1959

CZECHOSLOVAKIA/Electronics - Electron and Ion Emission.

H

Abs Jour : Ref Zinur Fizika, No 12, 1959, 27806

Author : Partlova, Marie; Eckertova, Ludmilla

Inst : Charles University, Prague, Czechoslovakia

Title : The Maximum Thermal Emission and Photoemission of a Silver-Cesium Photocathode

Orig Pub : Ceskosl. casop. fys., 1959, 9, No 2, 215-217

Abstract : It was shown experimentally that, in spite of the prevalent opinion that the maximum of thermal electronic and photoelectric currents in an oxygen-silver-cesium photocathode occur during the process of activation simultaneously, this may not be so. Depending on the conditions under which the activation is carried out, the maximum of photocurrent may occur earlier than the maximum of thermal emission and vice versa.

Card 1/1

4  
The maximum of thermoemission and photoemission of  
silver-cesium photocathodes. M. Partlová and L. Ecker-  
tová (Karlova Univ., Prague). *Czechoslov. J. Phys.* 6,  
203-5 (1959) (in Russian).—The time and temp. dependence  
of the electron emission current are studied.

A-K-

R

ECKERTOVA, L.

Effective photocathodes. p. 424

ČESKOSLOVENSKÝ ČASOPIS PRO FYSIKU. (Československá akademie věd. Ústav  
technické fyziky) Praha, Czechoslovakia. Vol. 9, no. 4, 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 10, Oct. 1959  
Uncl.

Distr: 4E3a(w) 2 cys

✓ Time dependence of autoelectron current from a tungsten point. L. Salimova-Eckertova and K. Malek (Karlova Univ., Prague), *Czechoslov. J. Phys.* 9, 512-18 (1959) (in Russian).—A description is given of the increase in autoelectron current from a W point with time after the voltage on the electron projector has been switched off. It is assumed that the increase in current is caused by desorption of adsorbed layers, which increases the work function. Hypotheses on the mechanism of desorption are put forward.

A. Kremelner

4  
1-1+P(c)  
2

ECHEKTOVA, L.

Seminar of electronics and vacuum physics. p. 551.

CESKOSLOVENSKY CASOPIS PRO FYSIKU. (Ceskoslovenska akademie ved. Ustav  
Technicke fyziky) Praha, Czechoslovakia. Vol. 9, no. 5, 1959.

Monthly List of East European Accessions (EEAI) LC. Vol. 9. no. 2, Feb. 1960  
Uncl.

Z/028/80/000/002/005/005  
D253/D304

AUTHOR: Eckertová, L.

TITLE: USSR

PERIODICAL: Pokroky matematiky, fysiky a astronomie, no. 2, 1960,  
218-219

TEXT: The article briefly reports on four scientific conferences which convened in the USSR in 1959. (1) The Scientific-Technical Conference on Nuclear Radiotechnical Engineering convened in Moscow on April 20-25, 1959. The conference, organized by the Glavnoye upravleniye po ispol'zovaniyu atomnoy energii (Central Institute for the Use of Atomic Energy), was attended by 800 scientists and technicians. A total of 102 reports were delivered on the following subjects: nuclear radiation detectors; amplitude and time analyzers; impulse apparatus; automation of measuring and data processing; spectrometers; voltage and current amplifiers and regulators. (2) The 6th Session of the Scientific Council of the Joint Nuclear Research Institute convened in Dubna on May 27 - June 2, 1959. The session was attended by leading nuclear physicists from 12 socialist countries. Subjects

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USSR

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dealt with were the structure of nucleons and the origin of mesons and antiparticles, etc. (3) The Conference on Measuring of Mechanical Quantities convened on June 13-19, 1959. Major subjects of the conference were the outlining of meteorological problems in the field of mechanical measuring; analysis of possibilities to perform mechanical measurements; evaluating accomplished studies and their practical application; etc. (4) The 9th All-Union Conference on Cathode Electronics convened in Moscow on October 21-28, 1959, and was also attended by delegates of China, the DDR, the CSSR and Hungary. The following 7 major subjects were dealt with: surface properties of solid materials; thermionic emission; photoemission; secondary emission; auto-emission and surface-ionization in strong electric fields; the properties and technology of cathodes; mutual interaction between solid materials and the stream of charged particles and/or residual gases. N. D. Morgulis reported on "Some Problems of High and Ultra-high Vacua"; L. N. Dobrecov reported on secondary emission and inelastic electron scattering (studies performed at the Leningrad Physico-Technological Institute of the AS USSR) and on direct conversion of thermal into electrical energy; P. V. Timofeyev reported on the application of  $\beta$ -emission in the vacuum. The reports delivered at the conference will probably be published in two issues of the

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journal "Izvestiya AS USSR, seria fizicheskaya." A further conference on  
cathode electronics is scheduled to take place in Kiyev in 1961.

Card 3/3

Z/037/60/000/005/024/056  
E192/E382

AUTHOR: Eckertová, Ludmila

TITLE: Field Emission<sup>γ</sup> from Thin Dielectric Layers<sup>γ</sup>

PERIODICAL: Ceskoslovensky casopis pro fysiku, 1960,  
No. 5, pp. 412 - 419

TEXT: There are several known theories dealing with the field emission from thin dielectric layers. One of these was proposed by Zernov (Ref. 3) and Hippel (Ref. 4); on the basis of this theory the emission current can be expressed by Eq. (1). A second theory due to Zernov expresses the emission current by Eq. (2). Another theory is due to Jacobs and others (Ref. 9), who investigated the emission of fine layers of MgO. However, on the basis of the available experimental data it is seen that all these theories cannot be regarded as satisfactory. The problem of the field emission was investigated experimentally. The experimental tube is shown in Fig. 2. This comprises an electron gun and a collector which captures the electrons of the beam. The tube is evacuated and is furnished with a pair of parallel plates  $P_1$  and  $P_2$ , one of which ( $P_2$ ) is covered with a thin layer of dielectric. The plates can be

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Z/037/60/000/005/024/056  
E192/E382

# Field Emission from Thin Dielectric Layers

connected to suitable potentials. First MgO was tried as the dielectric but it was difficult to obtain any consistent results. The main investigations were done with mica sheets having a thickness of 15 - 20  $\mu\text{m}$ . These were measured in the circuit shown in Fig. 3. First, the dependence of the emission current on the voltage applied across the dielectric was determined. It was found that the current could be observed only when the voltage was sufficient to produce a breakdown in the dielectric. Afterwards it was possible to obtain the field emission current at much lower voltages. The stability and reproducibility of the results differ from sample to sample and depend on the voltage applied to the sample. Fig. 4 illustrates the time dependence of the current in a very unstable sample at voltages of 1 000 V and 800 V. Other samples showed considerably less variations so that their characteristics could be measured without difficulty. Most of the measurements gave similar results to those indicated in Fig. 5, where the shaded area represents the region covered by 8 measurements; the first 4 measurements were done

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E192/E382

Field Emission from Thin Dielectric Layers

immediately after each other, while the remaining 4 were taken after a long time interval. The effect of varying collector voltage is illustrated in Fig. 6. The temperature dependence of the field emission current is illustrated in Figs. 7, where this effect was investigated indirectly and approximately. The emitting layer in this case was placed in an oven which was heated by a tungsten coil. The dependence of the emission current on times was measured for various heating currents flowing through the coil. One of the main characteristics of the emissive systems employed in the experiment is the simplicity of their construction and their mechanical strength. This is due to the fact that the dielectric layer is firmly held in its position by a grid. However, it is not clear how far the experiments are valid in explaining the physics of field emission. In order to answer this problem the system was simulated by an electronic tank, by means of which it was possible to plot the equipotentials.

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E192/E382

Field Emission from Thin Dielectric Layers

There are 8 figures and 16 references: 8 English, 5 Soviet and 3 German.

ASSOCIATION: Katedra elektroniky a vakuove fysiky Karlovy university, Praha (Chair of Electronics and Vacuum Physics of Charles University, Prague)



Card 4/4

9.4/30 2201 2801 2104  
2301 3001

83384  
Z/037/60/000/005/025/056  
E192/E382

AUTHORS: Kryška, Ladislav and Eckertová, Ludmila

TITLE: A Dynamic Electron Multiplier

PERIODICAL: Československý časopis pro fysiku, 1960,  
No. 5, pp. 420 - 424

TEXT: A dynamic electron multiplier was designed on the basis of Krebs and Meerbach theory (Ref. 4). The device consisted of two rectangular dynodes and two electrodes producing a transverse field. A high-frequency field was applied to the dynodes. Some of the experimental tubes were furnished with a tungsten helix which was situated in the vicinity of the negative electrode and served as a source of primary electrons. The positive electrode served as a collector. The distance between the dynodes was 2 cm and the length was 7 cm. The electrodes were made of non-activated beryllium bronze. In order to obtain the secondary emission coefficient greater than unity, the energy of the incident electrons had to be higher than 100 eV. Under the assumption that the average energy of the electrons is 4 eV, it was calculated that at the frequency of 120 Mc/s the amplitude can change between 200 and 650 V. The primary electrons were

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# A Dynamic Electron Multiplier

provided either by a tungsten cathode or by the photo-emission produced by ultra-violet radiation (the multipliers were fitted with a silica window). The tubes were evacuated by means of an oil diffusion pump and then gettered, so that the internal pressure after sealing off was  $10^{-8}$  to  $10^{-9}$  mm Hg. The measurement circuit employed in the experiments is shown in Fig. 2. The auxiliary devices such as the high-frequency oscillator, voltmeter and DC amplifier were specially constructed for the measurements. The operating region of the multiplier lies between 80 and 130 Mc/s. This is illustrated in Fig. 3, where Curve 1 shows the mean amplitude  $U_0$ , at which the multiplication occurs; Curve 2 correspond to the maximum collector current, while Curve 3 denotes the region at which there is no multiplication. Curves 4 and 5 in Fig. 3 represent an additional operating region but this was found to be very unstable. The dependence of the output current on the transverse voltage (the primary current being constant) is illustrated in Fig. 4. Fig. 5 shows the effect of the collector current on the primary current; it

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is seen that the relationship is linear only over a certain region. Fig. 6 gives the dependence of the collector current on the amplitude at the frequency of 130 Mc/s. The maximum multiplication which could be obtained with the device was 5 000. From the experiments it is concluded that the principle of the dynamic electron multiplication can successfully be employed in electron multipliers but the maximum amplification is limited by the principal stable value of the secondary emission coefficient of the dynodes and the critical value of the transverse field at which the self-excitation of the system may occur. The system is also disadvantageous in that it requires a very good vacuum and cannot be easily used for the amplification of pulse signals.

There are 6 figures and 7 references: 3 English. 3 German and 1 Czech.

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AUTHOR: Eckertová, L.

TITLE: The Ninth All-Union Conference on Cathode Electronics

PERIODICAL: Slaboproudý obzor, 1960, Vol 21, No 2, pp 125-126

ABSTRACT: The conference took place during October 21-28, 1959, in Moscow at the Institute of Radio Engineering Electronics of the Soviet Academy of Science. Over 120 papers and communications were read and the conference was attended not only by the Soviet specialists but also by representatives of China, Eastern Germany, Czechoslovakia and Hungary. During the plenary session of the conference a number of papers were read which were primarily concerned with the future developments of cathode electronics. The work of the conference was divided into the following sections:

- (1) Surface properties of solids.
- (2) Thermal emission.
- (3) Photo-emission.

Card 1/2 (4) Secondary emission.

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- (5) Field emission and surface ionization in strong electric fields.
- (6) The characteristics, new types and cathode technology.
- (7) Interaction between solids and charged atomic particles.

The next conference on the subject will take place in Kiyev in two years time.

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AUTHOR: Eckertova, L.

TITLE: Physics and applications of cathodes emitting in strong electric fields

PERIODICAL: Ceskoslovensky casopis pro fysiku, no. 5-6, 1962, 561 - 572

TEXT: This survey deals with field emission cathodes in which the electrons are emitted due to a strong electrostatic field, although the actual mechanism of emission may vary in different types of cathode. The best known field-emission device is the point cathode, whose current density is described by the Fowler-Nordheim formula:

$$i = \frac{e^3}{8\pi h \varphi} E^2 \exp \left[ - \frac{8\pi}{3} \frac{\sqrt{2m}}{h} \frac{\varphi^{3/2}}{eE} \int_0^\infty \left( \frac{V_e^3 E}{\varphi} \right) \right] \quad (1)$$

where  $E$  is the field,  $\varphi$  is the work function,  $\theta$  is the Nordheim function,  $h$  is the Planck constant and  $m$  and  $e$  are Card 1/4